

Appl. No. 09/876,411
Amdt. Dated October 24, 2007
Reply to Office Action of March 12, 2007

REMARKS

Applicants have added new claims 21 - 27 in order to alternately define the invention as disclosed.

Without conceding the propriety of the Examiner's position, and solely to expedite prosecution, claims 7 and 17 - 18 have been cancelled without prejudice or disclaimer.

Applicants have amended claims 19 and 20 in order to obviate the Examiner's rejection under 35 U.S.C. §112. Applicants submit that support for the new claim language can be found in paragraphs [0054] and [0082] of Applicant's published specification. Accordingly, Applicants respectfully request the Examiner withdraw the rejection under 35 U.S.C. §112.

Applicants note that under 37 C.F.R. § 1.104 and M.P.E.P. § 707.07(f), the Examiner must provide a complete action on the merits, and must answer the substance of any arguments set forth by the Applicant in the last response.

In this case, the Examiner failed to address the significant and material arguments set forth on page 9, line 19 – page 10, line 2. In that portion of the response, Applicants noted that the Examiner had construed the cylindrical antenna structure 30/60/14 as the claimed “conductive case.” However, such a construction fails to read-on the claim limitation requiring that the conductive case “surround and house all or a portion of the signal processing circuit” that processes a signal corresponding to a wireless signal received by the antenna. Accordingly, for at least this reason, the Examiner cannot rely upon the antenna structure 30/60/14 as reading on the claimed “conductive case.”

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Additionally, Applicant's note that the Examiner has used the antenna structure 30/60/14 to read on both the claimed "antenna for transmitting and / or receiving a wireless signal" and the claimed "conductive case for surrounding a signal processing circuit" which receives a signal from the antenna. However, the claim language clearly requires an antenna and a separate conductive case that surrounds a circuit that receives a signal from the antenna.

Applicants note that, as clearly described in Thiel, the monopole elements 52 – 58 / 32 – 38 are part of the antenna structure 30/60/14, and therefore can not be construed as a "processing circuit" located within the antenna / conductive case that receives a signal from the antenna.

Accordingly, the Examiner has failed to disclose any one or more references that disclose a conductive case that surrounds all or part of a signal processing circuit that processes a signal corresponding to a wireless signal received by an antenna.

For at least this reason, Applicants submit that the Examiner should withdraw the rejection of all claims, and place this application in condition for immediate allowance.

Applicants note that the Thiel reference is directed to an antenna design that provides directionality of the emitted signal and thereby reduces the amount of RF energy reaching a user. (See the Abstract of the Invention section and Column 1, lines 41 – 44). Thiel discloses two methods for accomplishing this goal. In a first embodiment, Thiel discloses a reflector plate 12 comprised of a conductive sheet 22 and a dielectric 24 which reflects radiation produced by the antenna, causing the reflected radiation to act in an additive manner and maximize the transmitted signal. (See Fig.'s 1a – 1c and Column 4, lines 40 – 61). In a second embodiment, Thiel discloses an antenna 30 (preferably solid) including four equally

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spaced quarter-wavelength monopole elements 32 – 38 mounted on an outer surface of the dielectric cylinder 40. (See Column 5, lines 1 – 6). Importantly, only one of the monopoles is active at a time, while the remaining three monopoles are connected to ground. (See Fig. 2). An additional circuit could be added to provide switching of the active monopole between the four available monopoles to provide directionality of the transmitted signal. (See Column 7, lines 25 – 29).

Importantly, and as noted above, Thiel fails to disclose each and every element of the claims, either alone, or in combination with Paulick.

Furthermore, the Examiner has appeared to combine the two embodiments disclosed in Thiel without providing any citation to the Thiel reference which discloses the combination of these two elements. Rather, Applicants submit that Thiel discloses the two embodiments (Fig. 1's directional reflector 12 and Fig. 3's electronically steerable antenna) in the alternative. This must be true as the imposition of the reflector 12 would prevent the electronically steerable antenna from operating properly in all directions. Furthermore, in Column 7, lines 40 – 41, Thiel discloses that the antenna of Fig. 3 does not guarantee a reduction in the exposure of a user to high energy radiation, but only may reduce it (likely depending on which monopole is currently active). Accordingly, Applicants submit that the Examiner's combination of the alternative embodiments of Thiel is improper and is not supported by the reference.

Finally, Applicants submit that, in contrast to Applicant's claims, Applicant's disclosure, and the Kotsuka disclosure, the reflector 12 of Thiel is not an electromagnetic wave absorber, and is not comprised of electromagnetic wave-absorbing material. As

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disclosed in Column 4, lines 58 – 61 of Thiel, the structure 12 reflects the signal radiated from the antenna in an additive manner in order to maximize a transmitted signal. As further disclosed in Column 4, lines 36 – 44, the structure 12 is made of alumina, which is not an electromagnetic wave absorbing composition as the term is defined by Applicants. (See paragraphs [0027] and [0083] of Applicant's disclosure, which clearly defines the term "electromagnetic wave absorber" to be a magnetic loss material such as ferrite, permalloy, sendust, stainless steel, an iron-based amorphous alloy, silicon steel, a magnetic material, or a magnetic alloy that can absorb electromagnetic energy). Accordingly, even if the term "electromagnetic wave-absorbing material" is not well-known or well-recognized in the art to be a material that absorbs electromagnetic energy, Applicants have acted as their own lexicographer and have set forth their own definition of the claim term. (See *Oakley, Inc. v. Sunglass Hut Int'l*, 316 F.3d 1331, 1341 (Fed. Cir., 2003)).

For at least this reason also, Applicants submit that the Examiner should withdraw the rejection of all claims, and place this application in condition for immediate allowance.

In light of the forgoing, the structure 12 of Thiel fails to read on the currently claimed electromagnetic wave-absorbing material.

In specific regard to claim 4, Applicants note that, as stated above, neither reference cited by the Examiner discloses a conductive shield case that surrounds a receiving circuit, transmitting circuit, and a printed circuit board. For at least this reason also, claim 4 is distinguishable over the cited art of record.

In specific regard to claim 8, Applicants submit that the cited portions of the Thiel reference (Col. 4, lines 37 – 49 and Col. 5, lines 62 – 67) fail to disclose any wire connection

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between the conductive layer 22 cited by the Examiner and the conductive case 60 cited by the Examiner. For at least this reason also, claim 8 is distinguishable over the cited art of record.

In specific regard to claims 10 and 11, Applicants note that a magnetic loss material is defined in the specification to be a material that can absorb the electromagnetic energy emitted towards a user, and thereby decrease the amount of energy reaching a user (See paragraph [0027] of the disclosure). Paragraph [0083] of Applicant's disclosure more specifically identifies the class of materials that function as "electromagnetic wave absorbers" to include magnetic loss materials such as ferrite, permalloy, sendust, stainless steel, an iron-based amorphous alloy, silicon steel, a magnetic material, or a magnetic alloy. In contrast, the reflector 12 of Thiel is not an electromagnetic wave absorber, and is not comprised of electromagnetic wave-absorbing material. As disclosed in Column 4, lines 58 – 61 of Thiel, the structure 12 reflects the signal radiated from the antenna in an additive manner in order to maximize a transmitted signal. As further disclosed in Column 4, lines 36 – 44, the structure 12 is made of alumina, which is not an electromagnetic wave absorbing composition as the term is defined by Applicants.

For at least this reason also, claims 10 and 11 are distinguishable over the cited art of record.

In specific regard to claims 12 and 16, Applicants submit that the Examiner has cited Paulick for its disclosure of a switching circuit and a feeder. However, neither Paulick nor Thiel disclose, teach, or suggest the additional claim limitation requiring that the electro-

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magnetic wave absorber is closely bonded to a portion of the shield case located between the feeder and the receiving circuit.

For at least this reason also, claims 12 and 16 are distinguishable over the cited art of record.

In light of the foregoing, Applicants respectfully submit that all claims now stand in condition for allowance. The undersigned invites the Examiner to contact him directly should there be a need to address any informalities or substantive arguments.

In the event that it is deemed necessary, the Commissioner is hereby authorized to charge any fees due or to credit any overpayment to Deposit Account No. 50-3891.

Respectfully submitted,

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